A View of the Storm: Forward Observations

by Colonel David A. Rolston

In July 1991, the US Army Field Artillery School (USAFAS) summarized FA observations in Operation Desert Storm. These observations were based on interviews with soldiers who fought in the Gulf War and after-action reports from combat units, which were submitted immediately after Desert Storm.

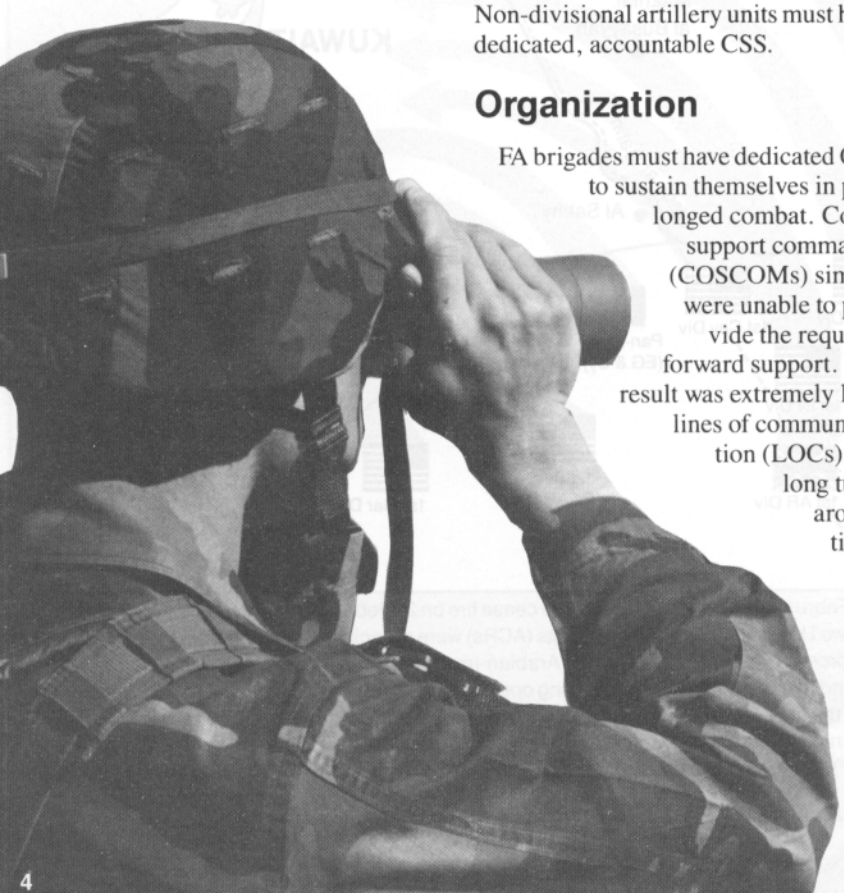
The comments early in the aftermath of the Storm are the results of initial research. Additional information will emerge and observations will be refined as time allows for more thorough analyses.

Doctrine

Our fire support doctrine for echelons through corps is sound. However, doctrine for a field army and joint fire support was virtually non-existent. Until the later stages of the operation, no fully capable fire support element (FSE) existed at the Army Central Command (ARCENT). Though required by basic fire support doctrine to establish an FSE, no tactics, techniques and procedures (TTPs) or organizational guidelines existed to help the ARCENT staff build one.

Air Force and Army fire support doctrine conflicted on several significant points, mostly concerning the definitions of fire support coordination measures (FSCMs). Promulgation and publication of approved joint fire support doctrine must become a high-priority Department of Defense (DoD) action.

Combat service support (CSS) doctrine for non-divisional FA units was unworkable. The area support concept for corps units, particularly FA brigades, didn't provide the required level of support. A corps "slice" is not the answer. Non-divisional artillery units must have dedicated, accountable CSS.



Organization

FA brigades must have dedicated CSS to sustain themselves in prolonged combat. Corps support commands (COSCOMs) simply were unable to provide the required forward support. The result was extremely long lines of communication (LOCs) and long turnaround times for logistics. Many of our units had run out of or almost run out of supplies when the cease fire was declared. FA brigades require a CSS structure similar to the forward support battalion (FSB) for a maneuver brigade. This structure must include the transportation assets necessary to support the CSS requirements of FA in AirLand Battle.

Tables of organization and equipment (TOEs) don't provide the personnel and equipment to support sustained split-command post (CP) operations for FSEs at the maneuver brigade and higher levels. For example, the current TOE for the brigade FSE authorizes only four people, inadequate to support multiple CPs. If the brigade commander establishes a tactical CP (TACCP) forward, there are no radios or vehicles to support it. To a lesser extent, this same problem exists at the division and corps level.

Training

Fire support coordination agencies at the division and higher levels generally lacked experience and skills. There are two major reasons for this situation. First, these FSEs seldom participate in integrated training because of the infrequency of integrated exercises at this level. The Battle Command Training Program (BCTP) is helping to close this gap, but BCTP doesn't exercise fire support agencies at echelons above corps (EAC).

The second reason is the lack of a resident or non-resident formal training program in the Training and Doctrine Command (TRADOC) to teach higher level fire support techniques and procedures. There are no programs of instruction (POIs) to train the targeting team, the FA intelligence officer (FAIO), the battlefield coordination element (BCE) or the FSEs at division, corps, and EAC. We must develop and implement instruction to formalize and standardize TTPs for these elements.

The good news was that Desert Storm validated the value of the Combat Training Center (CTC) concept. Our commanders at all levels credited BCTP and the CTCs with helping to develop the skills that contributed to the success they enjoyed in Southwest Asia. This was especially true in the fire support arena where the synchronization skills learned in simulated combat provided commanders a fully integrated fire support system.

Two shortfalls were observed. The existing system doesn't integrate EAC play in BCTP exercises. Additionally, FA brigades aren't exercised at the CTCs, and the brigade headquarters are not always integrated into BCTP.

Another problem identified was that the support of the intelligence system for the Army targeting effort was inadequate. Intelligence information must meet specific requirements for timeliness and accuracy to make the targeting process work. Division and corps acquisition systems were unable to routinely meet these criteria. National and Central Command (CENTCOM) assets were only occasionally prioritized to satisfy corps and lower unit targeting requirements.

Much of the intelligence effort was focused on situation development and battle damage assessment (BDA) for EAC. Further, there's minimal published doctrine or TTPs for targeting at the EAC and joint levels.

Information flow from ARCENT and CENTCOM to lower echelons was slow and seldom accommodated the immediate needs of the corps. The targeting process at these levels must be formalized and incorporated into Army and joint doctrine. The procedures for allocating intelligence resources and processing and disseminating intelligence data must be defined as a part of that process.

Procurement of an unmanned aerial vehicle (UAV) would provide a system capable of meeting the time and accuracy requirements for corps and division targeting.

Materiel

There were a number of notable FA materiel success stories. In its first use in combat, the multiple launch rocket system (MLRS) decisively demonstrated its ability to shoot, move and survive while inflicting tremendous damage on the enemy's morale and materiel. Though still in development, the Army tactical missile system (Army TACMS) provided the corps commander the means to attack critical deep targets. Despite some mobility problems, the Firefinder radar system allowed fire support to quickly locate and silence enemy artillery. Improved conventional artillery munitions proved to be even more lethal than anticipated, and precision-guided munitions (Copperhead) performed with pin-point accuracy, despite the degrading effects of the desert environment.

Though not specifically FA systems, the heavy expanded-mobility tactical truck (HEMTT) and the high-mobility multipurpose wheeled vehicle (HMMWV) contributed greatly to the logistical sustainability and C^2 of the fire support system.

On the whole, the FA weapon systems were sufficiently mobile and lethal to support the maneuver forces, despite the fact that most of the cannon systems represented 1960s or earlier technology. Materiel shortcomings were overcome by detailed planning and initiative on the part of our leaders. The events of Desert Storm highlighted some known deficiencies.

•**Several parts of the Field Artillery system weren't mobile enough.** FA CPs must be at least as mobile as the tactical CP of the maneuver force it supports. FA headquarters, burdened with 5-ton expandable vans and trailer-mounted 15-kilowatt generators and lacking track laying C2 vehicles, were sometimes unable to keep pace.

The M981 fire support vehicle (FSV) was too slow to stay up with the Bradley fighting vehicle and Abrams tank units. Further, an excessive amount of time is required to employ the ground/vehicular laser locator designator (G/VLLD), and the turret was difficult to maintain.

Fire support officers (FSOs) and fire support coordinators (FSCOORDs) at the maneuver battalion and higher levels require either dedicated space, radios and equipment in existing maneuver C^2 vehicles or dedicated combat vehicles of their own.

The M548 ammunition carrier lacks mobility and, when fully loaded, is often the slowest vehicle in the force. The speed of the M548 was sometimes the determining factor in the maneuver rate of advance.

The FSV must be upgraded or replaced, preferably with a Bradley variant. The M548 must be replaced.

•**The lack of range capability for cannon systems relative to the Iraqis' was a potential problem.** This disadvantage was negated by the Iraqis inability to target beyond their forward line of own troops (FLOT) and by the effectiveness of our counterfire operations. This can't be assumed to be the case in all future scenarios. It's likely that any enemy force encountered in the future will have range capabilities at least equal to those of the Iraqis. Extending the range of both cannon and rocket systems must be a high priority.

The lethality of our improved conventional munitions was a real success story. Current munitions proved to be even more lethal than our models predicted. The down-sizing of the force and the consequent reduction in the potential number of artillery systems available to the maneuver commander make developing and fielding "smart" and "brilliant" munitions more essential than ever.

•**We lack a reliable means of secure long-range communications for highly mobile operations.** This is particularly true of digital communications. Mobile subscriber equipment (MSE) worked well during Desert Shield training for voice command and control, but the area common-user communications system (ACCS) wasn't mobile enough to support AirLand Battle operations. Under optimum conditions, the ACCS doesn't support data traffic well. This limits the FA's ability to make maximum use of its automation capabilities when beyond FM radio range. Fielded AM radios are scarce, unreliable and unsuitable for digital traffic.

An effective data communications network, improved high frequency radios, and access to tactical satellites (TAC-

SATs) down to the missile battalion, division artillery, FA brigade and corps artillery CPs are urgent requirements.

•The global positioning system (GPS) was one of the real heroes of the war. It has been universally praised by commanders at all levels. GPS enhances C^2 by freeing the commander from the burden of land navigation. GPS locations were found to be accurate enough for all the requirements of accurate, predicted artillery fire. Also, GPS was invaluable in providing positions to artillery systems that need periodic position updates—MLRS and the position and azimuth determining system (PADS). It also enhanced CSS by allowing units to maintain extended LOCs across terrain in which navigation was difficult. The only complaint about GPS was that there weren't enough of them.

Leadership

Desert Storm validated our training and leader development efforts here at USAFAS and in the FA community as a whole. Our units and individual soldiers were well led and fully combat ready. The high state of individual training and the cohesion and high morale of our units are testimonies to the extraordinary efforts of the NCO corps. Our officers consistently demonstrated both technical and tactical competence and the ability to adapt to unanticipated situations. Commanders Army-wide have created command climates in which capable, creative junior leaders are nurtured and thrive.

Conclusion

The United States Army FA School will continue to identify and evaluate Desert Shield and Storm issues relating to doctrine, training, organization, materiel and leadership development on behalf of the FA community. We stand ready to assist in any way to keep the FA—the Greatest Killer on the Battlefield.

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Redlegs of the 82d Airborne Division hustle to load their 105-mm howitzer to fire during training in Saudi Arabia.